

# **SOCIETY FOR BASIC UROLOGIC RESEARCH**



**8th Annual Spring Meeting**

**May 13-14, 1994**

**Moscone Convention Center  
San Francisco, CA**

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**ABSTRACT FORM**  
Society for Basic Urologic Research (SBUR)  
Spring Meeting  
May 13-14, 1994

**IDENTIFICATION OF GENES ASSOCIATED WITH PROSTATE CANCER DEVELOPMENT.**

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Identification of genes specifically expressed in tumor cells but not in normal cells, or *vice versa*, is important for the understanding of the molecular basis of carcinogenesis and may provide us with markers for early tumor detection. Recently, the technique of differential display has been proven to be a powerful tool to identify and clone differentially expressed genes. The technique involves the reverse transcription of mRNA using an anchored oligo-dT primer, followed by a PCR amplification reaction using several different, arbitrarily chosen primers and subsequent separation of the products on a denaturing gel. In the study presented here, mRNA from normal, benign hyperplastic and tumor prostatic tissue from the same patients was used for differential display analysis. Twenty different combinations of primers were tested. Twelve apparently differentially expressed mRNAs (overexpressed in tumor or in normal tissue) were identified this way. The cDNA fragments were recovered from gel, reamplified and used as probes for Northern analysis. One of the probes (DD3) detected two transcripts (2.2 and 4.0 kb) that are specifically expressed in human prostatic tumors (9 out of 12 tumors studied) whereas no expression of these transcripts was found in normal or benign hyperplastic prostate tissue. Also no expression was detected in normal human kidney or kidney tumors or in several other normal human tissues. Nucleotide sequence analysis showed no homology of DD3 to any known gene. Currently, more sequence data are being obtained as well as studies are being performed to analyse the tissue-specificity of DD3 expression and expression in other tumors.

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Dr. Donna Peehl, Department of Urology  
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Circle one category which best represents the subject of the abstract:  
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